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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,445	12/08/2003	Robert Walker	2003P54211US/I331.125.101	2272

7590 02/14/2005  
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EXAMINER

TAN, VIBOL

ART UNIT PAPER NUMBER

2819

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

CT

<b>Office Action Summary</b>	<b>Application No.</b> 10/730,445	<b>Applicant(s)</b> WALKER, ROBERT	
	<b>Examiner</b> Vibol Tan	<b>Art Unit</b> 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.  
 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application:  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☒ Claim(s) 23-25 is/are allowed.  
 6) ☒ Claim(s) 1-8, 13-16, 19, 26, 27 and 31 is/are rejected.  
 7) ☒ Claim(s) 9-12, 17, 18, 20-22 and 28-30 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/8/03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8, 13-16, 19, 26, 27 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Volk (U. S. PAT. 6,356,105).

In claim 1, Volk teaches all claimed features in Figs. 1, 2 and 4, a chip to chip interface comprising: a driver (200) configured to provide a first signal (226) in response to a change in first data (DATA high) at one edge of a clock signal (first edge of 208) and a second signal (228) in response to a change in second data (DATA low) at another edge (second edge of 208) of the clock signal; and a receiver (452, 454, 458, 460) configured to receive the first signal (+ terminal of 458) and the second signal (+ terminal of 460) and toggle a first bit (410) in response to the first signal and toggle a second bit (414) in response to the second signal.

In claim 2, Volk further teaches the chip to chip interface of claim 1, wherein the receiver is configured to provide the first bit (410) to represent the first data (DATA high) and to provide the second bit (414) to represent the second data (DATA low).

In claims 3 and 4, Volk further teaches the chip to chip interface of claim 1, wherein the first data is positive edge data in a double data rate data stream (a DDR

bus interface; col. 2, line 62); and wherein the second data is negative edge data in a double data rate data stream (a DDR bus interface; col. 2, line 62).

In claims 5 and 6, Volk further teaches the chip to chip interface of claim 1, wherein the receiver is configured to provide the first bit (410) to a circuit (inside 402) at each positive edge of the clock signal (Clock); and wherein the receiver is configured to provide the second bit (414) to a circuit (another circuit inside 402) at each negative edge of the clock signal (Clock).

In claims 7 and 8, Volk further teaches the chip to chip interface of claim 1, wherein the first signal is a high (Vdd); and wherein the second signal is a low voltage (0V or ground) pulse.

Claims 13-16 and 19 correspond to detailed circuitry already discussed similarly with regard to claims 1-8.

Method claims 26, 27 and 31 correspond to detailed circuitry already discussed similarly with regard to claims 1-8.

3. Claims 9-12, 17, 18, 20-22 and 28-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 23-25 appear to comprise allowable subject matters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vibol Tan whose telephone number is (571) 272-1811.

The examiner can normally be reached on Monday-Friday (7:00 AM-4:30 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike J. Tokar can be reached on (571) 272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**VIBOL TAN**  
**PRIMARY EXAMINER**